REMARKS/ARGUMENT

Claims 1 and 8 have been rejected under 35 U.S.C. § 102 and claims 3-7 and 9 under 35 U.S.C. § 103 over Takayama, Yuhara or Kimura, and claim 2 has also been rejected under 35 U.S.C. § 102 over Kimura. These rejections are respectfully traversed.

It is respectfully submitted that all rejections based on Kimura should be withdrawn. The Kimura patent has an effective reference date of May 24, 1999, its U.S. filing date, since it does not constitute the national filing of a PCT application but rather is a continuation thereof. The present case claims priority to an application filed in Japan on August 5, 1998. A certified copy and a translation of that priority document are already of record in the present application.

The Yuhara and Takayama references teach layered electrodes in which both the upper and lower electrodes comprise aluminum. The present invention calls for upper and lower electrodes in which the upper electrode is aluminum and the lower electrode comprises a material capable of being reactive ion-etched with a fluorine-based gas. Aluminum is not capable of being etched by a fluorine-based gas, a requirement of the claimed lower electrode, and therefore both references fail to teach or suggest the construction of the present invention.

The Office Action seeks to avoid the claim recitation that the lower electrode is F-ion etchable by averring that "capable of" is not actually a limitation because anything can become "capable of" something else given a sufficient passage of time. It is respectfully submitted that this assertion is improper and constitutes nothing more than baseless speculation. The Office has the burden of establishing a prima facie case and that burden cannot be discharged by deeming, with any factual basis, that something is changeable to meet the recitations of the claims. It is respectfully submitted that the burden is on the Office to provide a factual basis for the assertion that aluminum constitutes a material capable of becoming reactive-ion etching with a fluorine-based gas over time. Without

such factual support, either in the form of a reference or an affidavit on personal knowledge by the Examiner, the rejection is untenable.

In light of all of the foregoing considerations, it is respectfully submitted that this application is now in condition to be allowed and the early issuance of a Notice of Allowance is respectfully solicited.

Dated: October 25, 2002

Respectfully submitted,

By 

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APPENDIX A
"Clean" Version Without Amended/New Indications
37 C.F.R. § 1.121(b)(1)(iii) AND (c)(3)

CLAIMS:

1. An electric device comprising:

a substrate;

a lower electrode layer on the substrate and comprising a material capable of reactive-ion etching with a fluorine-based gas; and

an upper electrode layer on the lower electrode layer and comprising a material capable of reactive-ion etching with a chlorine-based gas, wherein said upper electrode comprises Al.

2. An electronic device according to Claim 1, wherein the lower electrode comprises at least one element selected from the group consisting of Si, Mo, W, B, C, S and Ta.

3. An electronic device according to Claim 2, wherein the lower electrode has a thickness of about 0.5 nm to 1000 nm.

4. An electronic device according to Claim 3, wherein the support comprises a piezoelectric material.

5. An electronic device according to Claim 4, wherein the lower electrode has a thickness of about 5-500 nm.

6. An electronic device according to Claim 5, wherein the substrate is selected from the group consisting of a single crystal substrate, single crystal film, triaxial orientation film and uniaxial orientation film.

7. An electronic device according to Claim 1, wherein the lower electrode has a thickness of about 0.5 nm to 1000 nm.

8. An electronic device according to Claim 1, wherein the support comprises a piezoelectric material.

9. An electronic device according to Claim 1, wherein the substrate is selected from the group consisting of a single crystal substrate, single crystal film, triaxial orientation film and uniaxial orientation film.

10. A method for manufacturing an electronic device, comprising the steps of:

providing a substrate having a base film on a surface thereon, said base film comprising a material capable of reactive-ion etching with a fluorine-based gas;

forming a cover film comprising a material capable of reactive ion etching with a chlorine-based gas on the base film;

forming a mask having a predetermined pattern on the cover film;

etching the cover film by chlorine-based gas reactive ion etching; and

etching the base film exposed by etching of the cover film by fluorine-based reactive ion etching.

11. A method according to Claim 10, wherein the base film contains at least one element selected from the group consisting of Si, Mo, W, B, C, S and Ta.

12. A method according to Claim 11, wherein the base film has a thickness of about 0.5 nm to 1000 nm.

13. A method according to Claim 12, wherein the base film has a thickness of about 1-500 nm.

14. A method according to Claim 13, wherein the substrate comprises a piezoelectric material.

15. A method according to Claim 13, wherein the substrate is selected from the group consisting of a single crystal substrate, single crystal film, triaxial orientation film and uniaxial orientation film.

16. A method according to Claim 10, wherein the base film has a thickness of about 0.5 nm to 1000 nm.

17. A method according to Claim 10, wherein the base film has a thickness of about 1-500 nm.

18. A method according to Claim 10, wherein the substrate comprises a piezoelectric material.

19. A method according to Claim 10, wherein the substrate is selected from the group consisting of a single crystal substrate, single crystal film, triaxial orientation film and uniaxial orientation film.